

Claims

1. Electrolytic device for halogen gas production from aqueous alkali halide solution in several plate-type electrolytic cells stacked and arranged side by side and provided with electrical contacts, each of the cells provided with a housing of two half-shells made of electrically conductive material, the housing being equipped with devices for feeding electrolytic current and reactants and for discharging electrolytic current and products, with anodic and cathodic electrodes and an electrolytic membrane arranged between the electrodes, wherein built-in components are fitted in at least one of the two half-shells thus permitting a defined increase in the liquid level and minimising the remaining gas volume accordingly, said built-in components forming an internal trough located parallel to the electrolytic membrane and arranged horizontally, a first interspace being provided between said trough and the electrolytic membrane, **characterised in that** a second interspace is formed between said trough and the upper side of the electrolytic chamber, the highest point of which is located above the lowest point of the upper inner electrolyte chamber in the area of the membrane, said trough having at least one opening communicating with said interspace between said trough and said upper side of the electrolytic chamber, and said trough having at least one outlet.
2. Method according to claim 1, **characterised in that** said interspace between said trough and said upper side of the electrolytic chamber is implemented as a gap.
3. Method according to claim 2, **characterised in that** said gap has a width of 2 to 3 mm.
4. Method according to any one of claims 2 or 3, **characterised in that** said gap is inclined both outwards and upwards with respect to the horizontal plane as seen from the electrolytic membrane.
5. Method according to any one of claims 2 to 4, **characterised in that** said gap presents a variable gap width, the delimiting surfaces thereof being straight, corrugated or arched.

6. Method according to claim 1,
characterised in that said interspace between said trough and said upper side of the electrolytic chamber is equipped with a perforated plate arranged in parallel to the electrolytic membrane or slightly inclined therefrom.
7. Method according to claim 1,
characterised in that said interspace between said trough and said upper side of the electrolytic chamber is equipped with duct bundles, the axes of the ducts lying in the plane of said interspace.
8. Method according to any one of claims 1 to 7,
characterised in that said interspace between said trough and said upper side of the electrolytic chamber is fitted with beads, webs, nipples or other spacers.
9. Method according to any one of claims 1 to 8,
characterised in that the components that form the trough, inlets, outlets and related supports are at least partly coated to ensure adequate corrosion protection.